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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/516,348

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Akira Nakabayashi

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EXAMINER

BROWN, JENNINE M

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/516,348

Applicant(s)

NAKABAYASHI ET AL.

Examiner

Jennine M. Brown

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/4/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

### ***Claim Objections***

Claims 1, 3-6 and 12 are objected to because of the following informalities: some of these groups seem to be Markush groups of other claims but are not claimed in that manner. It seems that BP1 is a Markush group of BP and that BA has two groups 7 and 8 whereas the modifier compound has not 3 but 5 structures related to any of (1) or (2) or (3) which would be structures 11, 9, 12, 13 and 10. If applicant means for these to be Markush groups they should be claimed as such. Appropriate correction is required.

Claims 14-25 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form. Claims 14-25 are drawn to a functional composite that comprises a substrate and film containing the composition in the preceding claims but does not further limit the composition of the preceding claims.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention as incomplete for omitting essential elements, such

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omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: The photocatalyst is undefined in the claim although defined in the specification. It is unclear what applicant's claimed structural units are attached to and whether or not they are polymeric in nature.

### ***Claims Analysis***

According to MPEP 2113, "[e]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted). The examiner is interpreting claims 1-21 as product by process claims and as such the patentability depends upon the product itself and not necessarily the process by which the product is produced, unless applicant comes forward with evidence establishing an unobvious difference between the claimed product and the prior art product. Examiner is treating claims 1-13 and 26 as product by process claims and as such patentability is determined based on the product produced.

Examiner will interpret any substrate onto which a film is formed using any of the compositions which meet the primary claims as satisfying the claim limitations of claims 14-25.

Any optionally claimed limitation will be regarded as not being present in the composition.

***Claim Rejections - 35 USC § 102/ Claim Rejections - 35 USC § 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-26 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kanamori, et al. (US 6756124 B2).

See entire document . Kanamori, et al. disclose a composition comprising a photocatalyst (col. 9, l. 62-col. 10, l. 5 – TiO<sub>2</sub> col. 10, l. 4-6) and (a) organosilanes (R<sup>1</sup>)<sub>n</sub>Si(OR<sup>2</sup>)<sub>4-n</sub> defined in column 3, lines 55-63. Because n can be 2, it meets the primary limitation for structures (a) wherein alkoxysilanes and dialkoxysilanes are preferred (col. 5, l. 19-col. 6, l. 65) or wherein a monovalent organic group comprising phenyl is disclosed (col. 5, l. 47). The compound (b) silicone containing phenyl and optionally containing alkyl (col. 8, l. 10-60) which may be used either alone or as a mixture of 2 or more (col. 9, l. 12-13) having a weight average molecular weight from 300-100,000, preferably 600-50,000 (col. 8, l. 61-65). The thickness of the coating is from 0.05-20 micron therefore it would be within the modified average particle diameter of the composition (col. 26, l. 4-11). Resin is also disclosed by its polymeric name as an additive (col. 22, l. 51-56). Kanamori, et al. disclose the dispersion of a photocatalyst with said organosilanes to produce a coating composition which is cured on a substrate (col. 10, l. 6-34, 38-65). Resin and film have been disclosed using said composition (col. 2, l. 45-59)

The prior art appears to disclose the invention as claimed on the basis of inherent property characteristics which either anticipate or render the claimed product obvious and the burden of proof that it does or does not shifts to the applicant as in *In re Best* 195 USPQ 430, 433 (CCPA 1877).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-R 9:30 AM - 7:30 PM; Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmb

  
J. A. LORENZO  
SUPERVISORY PATENT EXAMINER